

Use and Influence of Social Media on the Private Practice of Plastic Surgeons in Saudi Arabia

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Background: Today, social media platforms are more popular than ever in Saudi Arabia. Despite the influence of social media on patients' decisions to undergo cosmetic surgery, it is still unclear how social media platforms affect the private practice of plastic surgeons around Saudi Arabia. This study aimed to assess Saudi plastic surgeons' use of social media and its impact on their practices.

Methods: The study was based on a self-administered questionnaire that was built on previous literature and distributed to practicing Saudi plastic surgeons. A survey consisting of 12 items was conducted to assess patterns of social media use and its impact on plastic surgery practice.

Results: This study included 61 participants. Thirty-four surgeons (55.7%) were using social media platforms in their practice. The use of social media was significantly different among surgeons with different levels of practice in cosmetic surgery ($P = 0.004$) and reconstructive surgery ($P = 0.049$). Social media presence was significantly more prevalent among surgeons in private practice (70.6%, $P = 0.034$). The use of social media in plastic surgery is overall positive for the field (60.7%).

Conclusions: Despite plastic surgeons' differing views on social media, its role within the field of plastic surgery is evidently on the rise. The use of social media is not equal across all practice types. Surgeons practicing in private hospitals and specializing in aesthetic surgery are more likely to view social media favorably and use it in their practice. (*Plast Reconstr Surg Glob Open* 2023; 11:e5012; doi: [10.1097/GOX.0000000000005012](https://doi.org/10.1097/GOX.0000000000005012); Published online 22 May 2023.)

INTRODUCTION

Social media platforms are becoming popular in Saudi society now more than ever. These platforms enable individuals to communicate with a wide range

of people around the country.¹ Social media platforms can have a tangible impact on the practice of plastic surgeons since they are inexpensive and accessible to virtually everyone. Additionally, they can help plastic and cosmetic surgeons promote their work to many potential patients. According to a study published in 2019, many plastic surgeons advertise their work on social media.² Furthermore, plastic surgeons can either utilize self-promotion or cooperate with influencers for higher exposure.² The influence of social media on patients' decision to undergo several cosmetic plastic surgery procedures, such as rhinoplasties, has been well documented.^{3,4} Furthermore, a study published in 2019 found that 51.4% of participants followed plastic surgeons on social media, and 48.5% were influenced by these platforms to undergo cosmetic surgery.⁵ Another study published in the same year reported that 68% of women visiting the facial plastic surgery clinic were influenced by social media to undergo aesthetic surgery.⁶ In a study by Economides et al, it was concluded

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that professional social media use in plastic surgery is on the rise.⁷ Despite this, acceptance is dichotomous. Younger surgeons in private practice are more likely to view social media as an acceptable method of reaching patients.⁷

Despite social media's influence on individuals' decisions to undergo cosmetic surgery, it remains unclear how social media platforms affect plastic surgeons' private practice in Saudi Arabia. Although social media platforms have been popular for a while now in Saudi Arabia, more studies need to be conducted on plastic surgeons' practices around the country. There are no available studies assessing this topic in the Middle East or specifically in Saudi Arabia. This study aimed to assess the use of social media among Saudi plastic surgeons and its impact on their private practice. This study provides a nationwide perspective from Saudi plastic surgeons to fill the gap in the literature.

METHODS AND MATERIALS

This cross-sectional study used a self-administered questionnaire that is structured in the context of other studies with similar aims and objectives.^{2,7-9} The survey was revised by three experienced plastic surgery consultants to ensure the objectivity and face validity of the items. In order to report this cross-sectional study, we followed the Standards for the Reporting of Observational Studies in Epidemiology (STROBE) checklist.¹⁰ The data were collected from October 1, 2022, until November 30, 2022, after being approved by the institutional review board of King Saud University, Riyadh, Saudi Arabia (ID: 35920AT). According to the Declaration of Helsinki, this investigation adhered to ethical principles.

The only inclusion criterion was being a Saudi plastic surgeon consultant; residents and non-board-certified plastic surgeons have been excluded. Being a Saudi plastic surgery consultant was the only inclusion criterion since this would provide a representative sample in order to achieve the study's objectives. As of yet, residents and non-board-certified plastic surgeons are not permitted to practice in private practice. After the questionnaire was uploaded to Google Forms, participants were approached through a WhatsApp broadcast message. Written informed consent was obtained from each participant before participating in the study, and the confidentiality of their data was guaranteed.

Along with demographic information, the survey included 12 items about plastic surgeons' use of social media and its impact on their private practices. (See **questionnaire, Supplemental Digital Content 1**, which displays the questionnaire used to determine social media usage, <http://links.lww.com/PRSGO/C571>). Participants were also asked to specify whether their primary practice setting was a private, nonacademic hospital (including government hospitals, or peripheral hospitals), or an academic hospital. Statistical analysis was carried out using RStudio (R version 4.1.1). Data was presented as frequencies and percentages (categorical data) or median and

Takeaways

Question: How does social media affect the private practices of Saudi plastic surgeons?

Findings: More than half of Saudi plastic surgeons use social media to promote their private practices. Among surgeons with different levels of experience in cosmetic surgery ($P = 0.004$), its use differs significantly, and the majority agrees that it has had a positive impact on the field (60.7%).

Meaning: Despite plastic surgeons' differing views on social media, its role within the field is evidently growing. Social media use varies by practice type. Aesthetic surgeons practicing in private hospitals are more likely to use social media in their practice.

interquartile range (numerical data). Group-based differences were assessed using inferential tests. Due to small or zero frequencies in distinct groups, we applied the Fisher exact test for categorical variables with simulated P values based on 2000 replicates. For the age variable (continuous), we used a Kruskal–Wallis rank sum test to assess age-related differences in the patterns of using social media. A P value of less than 0.05 indicates statistical significance. A multiple-response analysis was performed to analyze participants' responses.

RESULTS

Demographic and Occupational Characteristics

A total of 61 surgeons responded to the survey in the current study (yielding a response rate of 88%). The majority of surgeons were male (88.5%). Less than half of the participants had obtained a Saudi residency program (42.6%). More than half of them (62.3%) were working in the Central region and had 0–10 years of experience (50.9%). More details about the remaining occupational characteristics are provided in [Table 1](#).

Patterns of Using Social Media Platforms and the Associated Factors

In general, 34 surgeons (55.7%) were using social media platforms in their practice. Additionally, five surgeons (9.2%) were in the process of making a social media presence. Approximately one-third of surgeons did not use social media platforms (32.8%), whereas 3.3% of them had previously used social media but have since removed it.

Instagram was the most commonly used social media platform (97.1%), followed by Snapchat (82.4%) and Twitter (35.3%). Social media business accounts were managed by surgeons themselves (82.4%) or other staff (41.2%). These business accounts were established to expand the clinical practice (76.5%) and for education (52.9%, [Table 2](#)).

Using social media platforms did not differ significantly based on participants' age ($P = 0.195$, [Table 3](#)), gender ($P = 0.387$), region of residence ($P = 0.266$),

Table 1. Demographic and Occupational Characteristics

Parameter	Category	N = 61 (%)
Age	Median (IQR)	45.0 (39.0, 54.0)
Gender	Male	54 (88.5%)
	Female	7 (11.5%)
Residency training program	Saudi	26 (42.6%)
	Canadian	20 (32.8%)
	German	5 (8.2%)
	French	4 (6.6%)
	Tunisia	2 (3.3%)
	American	2 (3.3%)
	British	2 (3.3%)
Years of practice	0–5 y	17 (27.9%)
	6–10 y	14 (23.0%)
	11–15 y	13 (21.3%)
	16–20 y	5 (8.2%)
	21–25 y	5 (8.2%)
	>25 y	7 (11.5%)
Region of practice	Central	38 (62.3%)
	Western	19 (31.1%)
	Eastern	4 (6.6%)
Percentage of practice in cosmetic surgery	0%–20%	6 (9.8%)
	21%–40%	16 (26.2%)
	41%–60%	15 (24.6%)
	61%–80%	11 (18.0%)
	81%–100%	13 (21.3%)
Percentage of practice in reconstructive surgery	0%–20%	20 (32.8%)
	21%–40%	18 (29.5%)
	41%–60%	13 (21.3%)
	61%–80%	8 (13.1%)
	81%–100%	2 (3.3%)
Fellowships*	Aesthetic	28 (45.9%)
	Hand surgery	19 (31.1%)
	Pediatric plastic surgery	10 (16.4%)
	Craniofacial	9 (14.8%)
	Microsurgery	22 (36.1%)
	Breast	20 (32.8%)
	Burn	12 (19.7%)
	Practice size	Single surgeon
Two surgeons	3 (4.9%)	
Group practice	24 (39.3%)	
Primary practice setting†‡	Private practice	34 (55.7%)
	No-academic hospital employed	20 (32.8%)
	Academic	26 (42.6%)
	Other	3 (4.9%)

*The responses were collected as multiple-choice responses.

†The total number of responses for the multiple-response item was 83 responses.

‡Nonacademic hospitals include community hospitals that are not affiliated with any university as well as primary healthcare clinics.

residency training program ($P = 0.310$), or years of practice ($P = 0.241$). However, the use of social media was significantly different among surgeons with different levels of practice in cosmetic surgery ($P = 0.004$) and reconstructive surgery ($P = 0.049$). Additionally, the majority of surgeons who had a breast plastic surgery fellowship had no occupational activity on social media (60%, $P = 0.008$). Notably, social media presence was significantly more prevalent among surgeons in private practice (70.6%, $P = 0.034$),

Table 2. Patterns of Using Social Media Platforms among Surgeons

Parameter	Category	N (%)*
Which social media platforms do you use in your practice?	Instagram	33 (97.1%)
	Snapchat	28 (82.4%)
	Twitter	12 (35.3%)
	Facebook	7 (20.6%)
	YouTube	6 (17.6%)
	TikTok	3 (8.8%)
	LinkedIn	4 (11.8%)
	Vimeo	1 (2.9%)
Who manages your business social media?	Do not use	1 (2.9%)
	You	28 (82.4%)
	Staff	14 (41.2%)
	Family	1 (2.9%)
What is the main reason for using social media in your practice?	Other	1 (2.9%)
	Create an online presence	14 (41.2%)
	Practice expansion	26 (76.5%)
	Education	18 (52.9%)
	Brand creation	17 (50.0%)
I do not use social media in my practice	1 (2.9%)	

*The responses of all the three items were collected as multiple-choice responses.

whereas no significant differences were noted in surgeons working in other primary practice settings (Table 3).

Attitudes toward the Role of Social Media in the Practice of Plastic Surgery

The majority of surgeons agreed or strongly agreed that patients are more likely to undergo plastic surgery when they are exposed to plastic surgery on social media (82.0%) and that the use of social media in plastic surgery is overall positive for the field (60.7%). Conversely, approximately one-third of the respondents (32.8%) disagreed or strongly disagreed that the use of social media in plastic surgery worsens the image of the field. (See figure, Supplemental Digital Content 2, which displays the surgeons' responses to the attitude items, <http://links.lww.com/PRSGO/C572>.)

DISCUSSION

As social media has evolved over time on numerous levels, it has become an integral part of our daily lives on a personal and professional level. The role of digital communication has evolved from a method of establishing personal relationships to that of a necessity for conducting business in the modern world. The role of digital communication in the lives and practices of plastic surgeons is no different. Although social media is considered to be very popular in Saudi Arabia, no studies have been conducted on the attitudes of plastic surgeons and the impact of social media on their practice. This study aimed to assess the use of social media among Saudi plastic surgeons, as well as the effect of social advertising on the number of patients and clinic load. Although social media is considered to be very popular in Saudi Arabia, no studies have been conducted on the attitudes of plastic surgeons and

Table 3. Factors Associated with the Current Use of Social Media Platforms

Parameter	Category	Current Use of Social Media Platforms				P
		No, N = 20	Yes, N = 34	Previous*, N = 2	Ongoing†, N = 5	
Age	Median (IQR)	47.0 (39.0, 56.8)	45.0 (39.0, 49.8)	60.0 (60.0, 60.0)	44.0 (42.0, 47.0)	0.195
Fellowships	Aesthetic	10 (35.7%)	16 (57.1%)	0 (0.0%)	2 (7.1%)	0.785
	Hand surgery	9 (47.4%)	8 (42.1%)	0 (0.0%)	2 (10.5%)	0.308
	Pediatric plastic surgery	5 (50.0%)	3 (30.0%)	0 (0.0%)	2 (20.0%)	0.113
	Craniofacial	3 (33.3%)	4 (44.4%)	0 (0.0%)	2 (22.2%)	0.429
	Microsurgery	9 (40.9%)	11 (50.0%)	0 (0.0%)	2 (9.1%)	0.667
	Breast	12 (60.0%)	8 (40.0%)	0 (0.0%)	0 (0.0%)	0.008
	Burn	7 (58.3%)	5 (41.7%)	0 (0.0%)	0 (0.0%)	0.232
Practice size	Single surgeon	11 (32.4%)	20 (58.8%)	1 (2.9%)	2 (5.9%)	0.942
	Two surgeons	1 (33.3%)	2 (66.7%)	0 (0.0%)	0 (0.0%)	
	Group practice	8 (33.3%)	12 (50.0%)	1 (4.2%)	3 (12.5%)	
Primary practice setting‡§	Private practice (solo or group)	8 (23.5%)	24 (70.6%)	0 (0.0%)	2 (5.9%)	0.034
	No-academic hospital employed	8 (40.0%)	8 (40.0%)	1 (5.0%)	3 (15.0%)	0.231
	Academic	10 (38.5%)	12 (46.2%)	1 (3.8%)	3 (11.5%)	0.603
	Other	2 (66.7%)	1 (33.3%)	0 (0.0%)	0 (0.0%)	0.690

Results in boldface are significant at $P < 0.05$.

*Previously had social media presence but have since removed.

†In the process of making a social media presence.

‡The responses were collected as multiple-choice responses.

§Nonacademic hospitals include community hospitals that are not affiliated with any university as well as primary healthcare clinics.

IQR, interquartile range.

the impact of social media on their practice. The current study found that 55.7% of participants used social media for their practice. Social media platforms did not differ significantly by participants' age ($P = 0.195$), gender ($P = 0.387$), region of residence ($P = 0.266$), residency training program ($P = 0.310$), or years of practice ($P = 0.241$). One study conducted by Economides et al in the United States that included 454 members of the American Society of Plastic Surgeons found that plastic surgeons who worked in private practice and were younger were more likely to view social media as a viable method of reaching their patients.⁷ In the past decade, plastic surgeons have increasingly used social media. In 2011, only 28.2% of 1000 board-certified plastic surgeons maintained a professional social media profile⁹; however, practice-related social media accounts continue to gain popularity. Among the surgeons who participated in this study, 55.7% used social media platforms for their practice. Additionally, 9.2% of the surgeons were in the process of making a social media presence. However, the majority of surgeons believe that it is inevitable that social media will enter the professional sphere. Incorporating the use of social media into one's practice could be because it is an excellent marketing and branding tool, as Vardanian et al found in a previous study that included 500 members of the American Society of Plastic Surgeons. According to their survey, the majority of respondents stated that maintaining professional social media accounts was driven by "creating an online presence" and "expanding practice."⁹ Our study supports this fact, as we found that the majority of participating surgeons agreed that patients prefer surgeons who appear on social media and that patients are more likely to undergo plastic surgery if they are exposed to plastic surgery on social media (82.2%). It has been the practice of aesthetic surgeons to adopt new technological trends such as internet-based marketing early, and individual websites

continue to be a popular means of disseminating information about the practice. Our study showed that the use of social media was significantly high among surgeons with different levels of practice in cosmetic surgery (57.1%). Moreover, social media presence was significantly more prevalent among surgeons in private practice (70.6%), whereas no significant differences were noted in surgeons working in other primary practice settings. On the other hand, when controlling for years in practice, no significant difference was found between years of practice and the usage of and maintaining professional social media appearance ($P = 0.241$). Also, this study found that the use of social media platforms did not differ significantly based on participants' age ($P = 0.195$), gender ($P = 0.387$), region of residence ($P = 0.266$), or residency training program ($P = 0.310$). Despite the enthusiasm surrounding professional social media use, some plastic surgeons believe that social media might worsen the field's image, but the result of this study supports the opposite, as 60.7% of the surgeons participating believe that social media is generally a positive influence on the field of plastic surgery.^{8,9} The findings of this study are in accordance with those of a previous study published in 2018 in which respondents believed that social media would benefit the field.⁷ It is believed that the current investigation adds considerable value to the current literature in Saudi Arabia with the largest sample size among Saudi plastic surgeons when compared to previously published articles on a similar targeted population.¹¹⁻¹³ There is a need for further research to identify all of the factors that influence the use of social media and to identify any demographic tendencies.

Recommendations for the Future and Limitations

The current study has several limitations that should be addressed. First, this study is a descriptive cross-sectional design, which may introduce bias due to the nature of the

study design. Second, the results survey was distributed as a self-administered questionnaire, which might introduce a response bias. Third, the response rate was low, which may be due to the busy schedule of plastic surgeons. Those surgeons who did not respond to the survey may be less familiar with web-based questionnaires; therefore, they are less likely to use social media. Despite the limitations, this study assessed the use of social media among Saudi plastic surgeons and its impact on their private practice. Based on the findings of this study, young plastic surgeons should utilize social media as early as possible in their careers and increase the general population's awareness of the scope of plastic surgery. In the future, we recommend that future studies be conducted to compare the use of social media among plastic surgeons and its impact on their private practices and government institutions.

CONCLUSIONS

Even though plastic surgeons have differing views on social media, there is no doubt that its role is growing within the field of plastic surgery. The use of social media is not equal across all types of practice. Surgeons practicing in private hospitals and aesthetic surgery are more likely to view social media positively and incorporate it into their practice.

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DISCLOSURE

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